

Project title : Calculating Family Expenses Using Servicenow

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CALCULATING FAMILY EXPENSES USING SERVICENOW

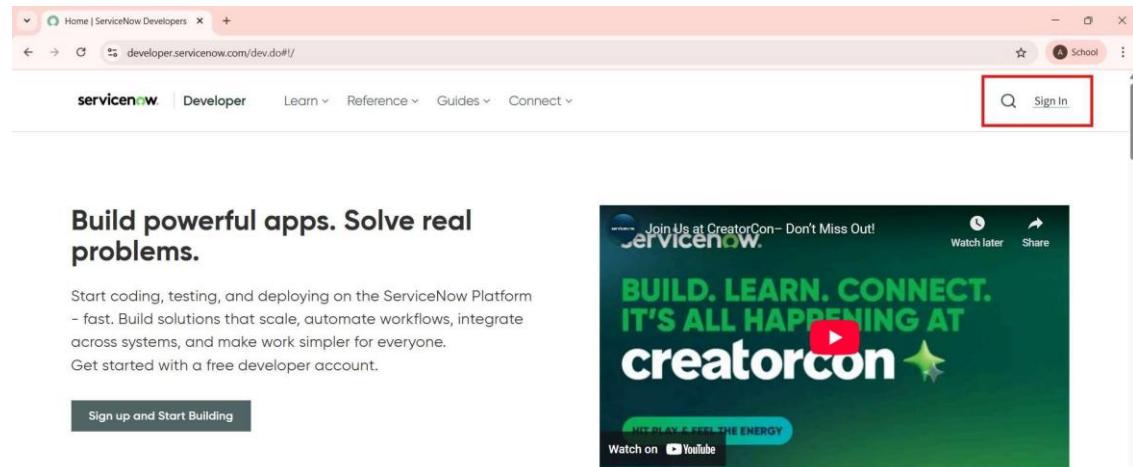
Aim of the project

To develop a centralized and automated platform that helps individuals or families track, manage, and optimize their expenses with ease. The goal is to promote financial discipline and simplify budget planning by using the powerful features of ServiceNow like scripting, reporting, and process automation. The project aims to develop a comprehensive expense calculation system using ServiceNow. This system will enable users to track and manage family expenses efficiently. It will include features such as expense categorization, budget setting, real-time tracking, and reporting capabilities. Utilizing ServiceNow's robust platform, the project will ensure seamless integration, user-friendly interface, and scalability to accommodate varying family sizes and financial complexities. The end goal is to empower users with the tools they need to make informed financial decisions and promote financial well-being within the family unit.

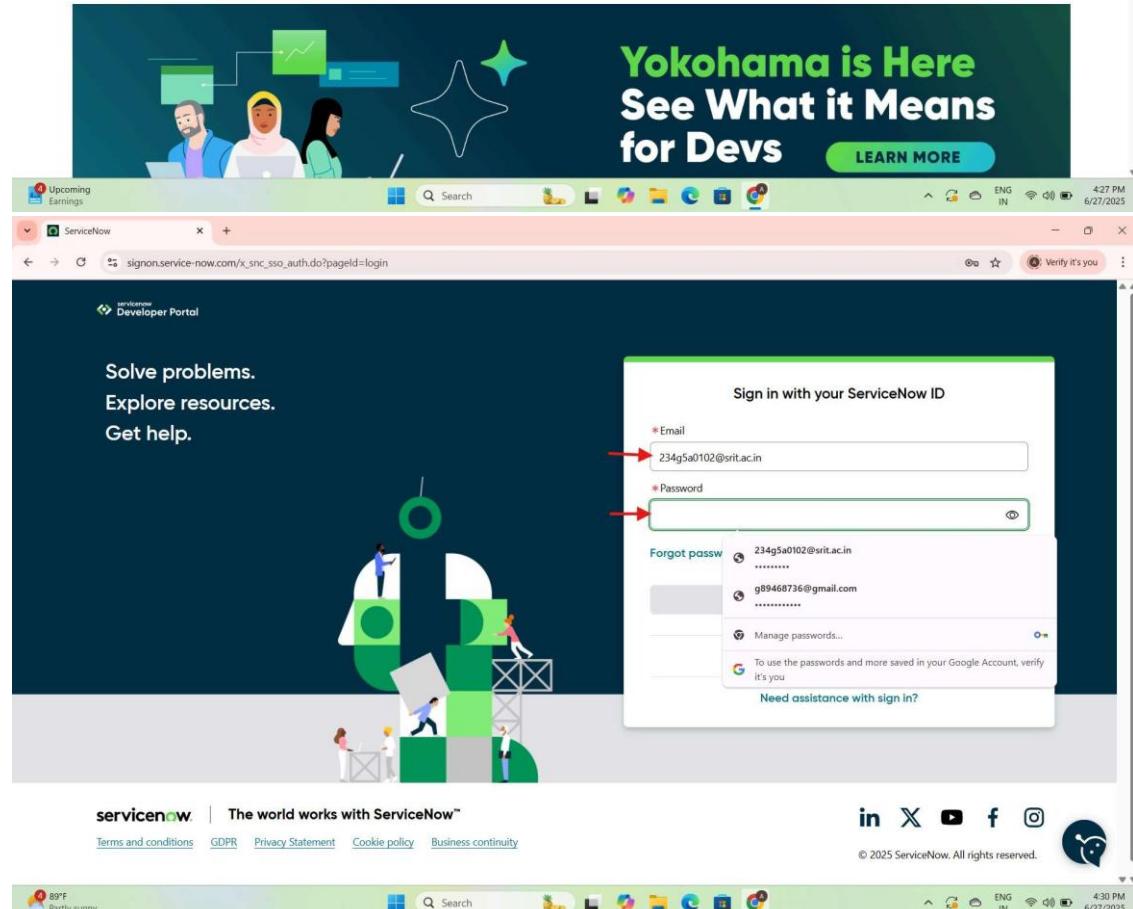
Milestone-1

Setting up servicenow instance

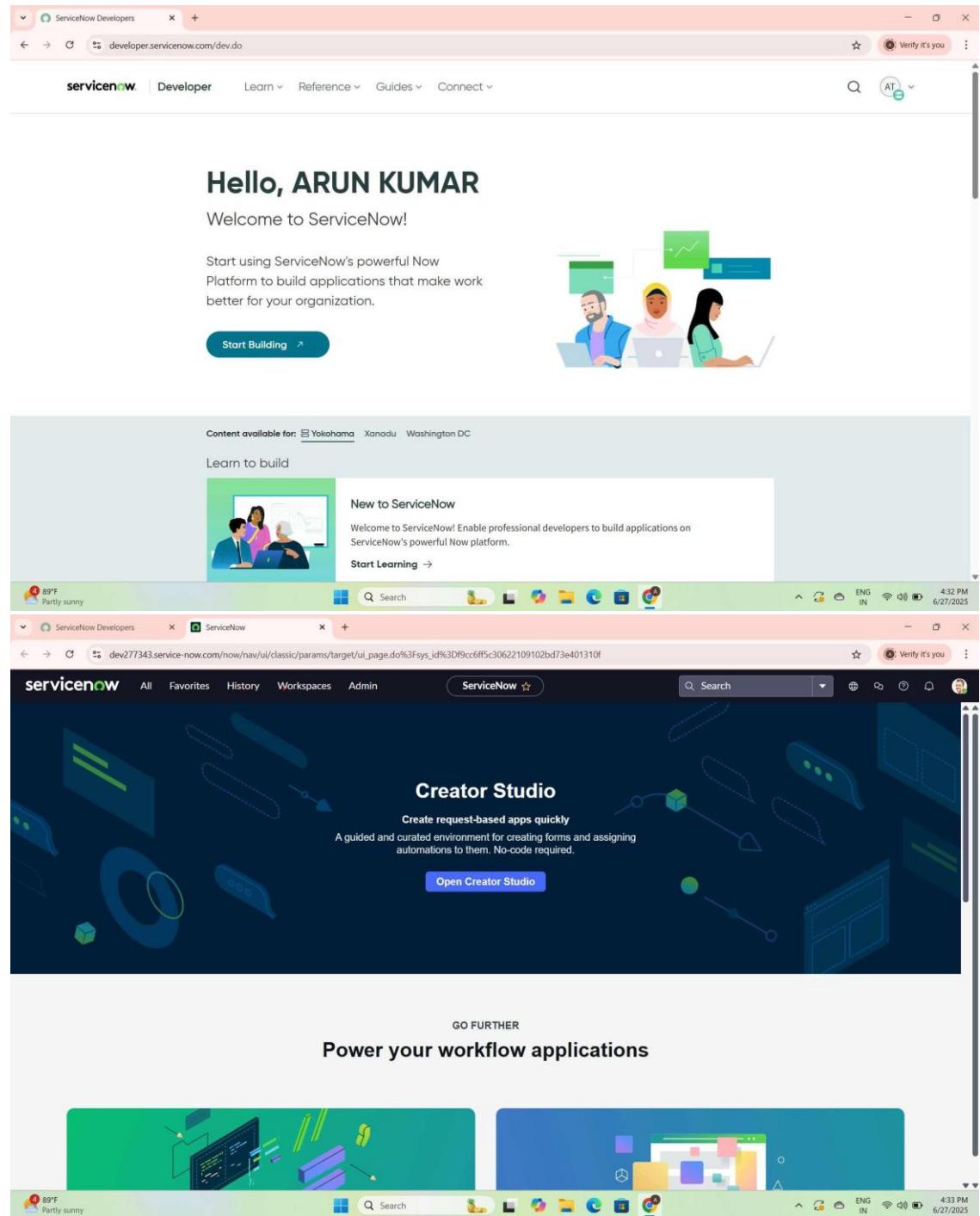
1. Sign up for a developer account on the ServiceNow Developer site "<https://developer.servicenow.com>".
2. Once logged in, navigate to the "Personal Developer Instance" section.
3. Click on "Request Instance" to create a new ServiceNow instance.
4. Fill out the required information and submit the request.
5. You'll receive an email with the instance details once it's ready.
6. Log in to your ServiceNow instance using the provided credentials.
7. Now you will navigate to the ServiceNow.



The screenshot shows the ServiceNow Developer portal homepage. At the top, there's a navigation bar with links for 'Developer', 'Learn', 'Reference', 'Guides', and 'Connect'. On the right side of the header is a search bar and a 'Sign In' button, which is highlighted with a red box. Below the header, a large banner features the text 'Build powerful apps. Solve real problems.' and a brief description of the ServiceNow Platform's capabilities. A 'Sign up and Start Building' button is visible. To the right of this is a promotional banner for 'CreatorCon' with the tagline 'Join Us at CreatorCon - Don't Miss Out!' and a 'Watch later' and 'Share' button.



This screenshot shows a Windows desktop environment. In the center, a browser window is open to the ServiceNow Developer Portal login page. The URL in the address bar is signon.service-now.com/x_snc_sso_auth.do?pagid=login. The login form is titled 'Sign in with your ServiceNow ID' and requires 'Email' and 'Password' inputs, both of which are highlighted with red arrows. Below the inputs are 'Forgot passw' and 'Manage passwords...' buttons. A note from Google suggests using saved passwords for better security. At the bottom of the form is a 'Need assistance with sign in?' link. The background of the desktop shows a ServiceNow-themed illustration of people working on a large green puzzle piece. The taskbar at the bottom includes icons for various applications like File Explorer, Edge, and Google Chrome, along with system status indicators for battery, signal, and volume.



Milestone-2

Creation Of New Update Set

1. Go to All >> In the filter search for Local Update set > click on New.
2. Enter the Details as: Name : Family Expenses
3. Then click on Submit and Make current.

The screenshot displays two main windows from the ServiceNow platform.

Top Window (Creator Studio):

- Header: ServiceNow Developers > ServiceNow
- Search bar: Search
- Content: "Creator Studio" section with the sub-headline "Create request-based apps quickly". Below it says "A guided and curated environment for creating forms and assigning automations to them. No-code required." A blue button labeled "Open Creator Studio" is present.
- Left sidebar: "FAVORITES" and "ALL RESULTS" sections. Under "ALL RESULTS", there is a "System Update Sets" category with a sub-item "Local Update Sets".

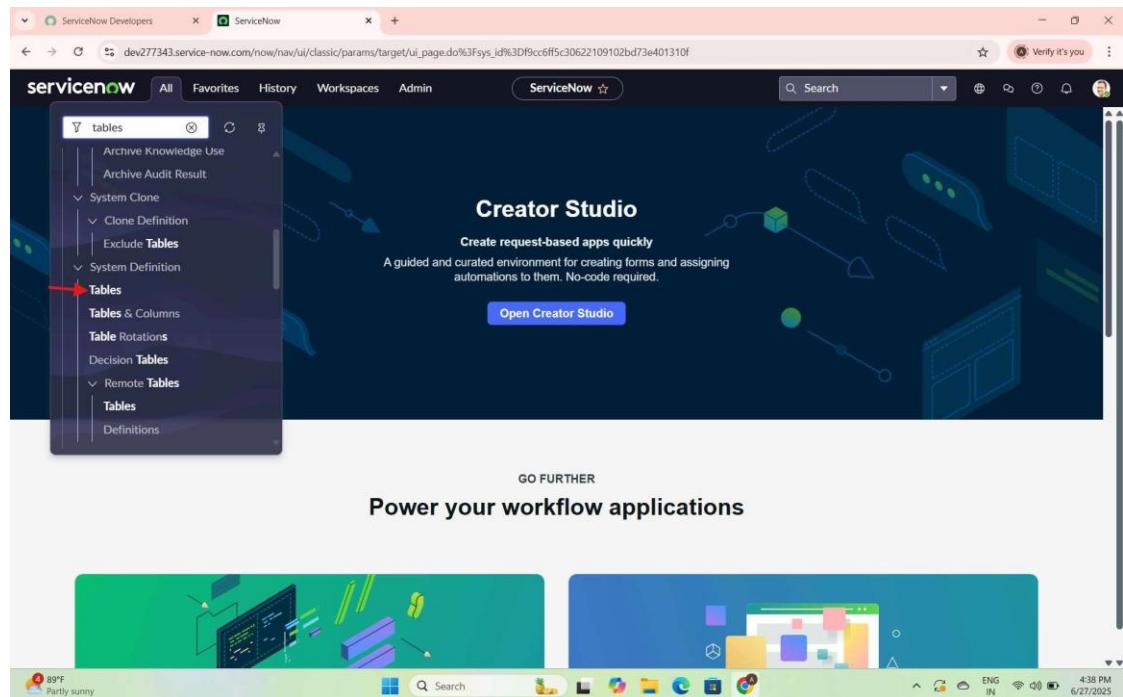
Bottom Window (Update Set - Family Expenses):

- Header: ServiceNow Developers > Family Expenses | Update Set |
- Content: "Update Set - Family Expenses" form with fields like Name (Family Expenses), State (In progress), Parent, Release date, Install date, Installed from, Application (Global), Created (2025-06-20 01:47:09), Created by (admin), and Merged to.
- Buttons: "Update" and "Related Links" (with options: Make This My Current Set, Merge With Another Update Set, Scan Update Set).
- Table: "Customer Updates (58)" table showing rows with columns: Created, Type, View, Target name, Updated by, Remote update set, and Action. Examples include "2025-06-23 00:00:25 Password Reset Process" and "2025-06-20 23:30:00 CMDB Workspace Multisource Class Metadata".

Milestone-3

Creation Of Family Expenses Table

1. Go to All > In the filter search for Tables > click on New.



2. Enter the Details: Label : Family Expenses Name : Auto-Populated New menu name : Family Expenditure
3. Go to the Header and right click there>> click on Save.

Creation of columns(fields)

4. Near Columns Double click near insert a new row.
5. Give the details as: Column label : Number Type : String
6. Double click on insert a new row again
7. Give the details as: Column label : Date Type : Date
8. Double click on insert a new row again
9. Give the details as: Column label : Amount Type : Integer
10. Double click on insert a new row again
11. Give the details as: Column label : Expense Details Type : String Max length : 800
12. Go to the Header and right click there>> click on Save.

Column label	Type	Reference	Max length	Default value	Display
Expense Details	String	(empty)	800		false
Amount	Integer	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Date	Date	(empty)	40		false
Number	String	(empty)	40	javascript:getNextObjNumberPadded();	false

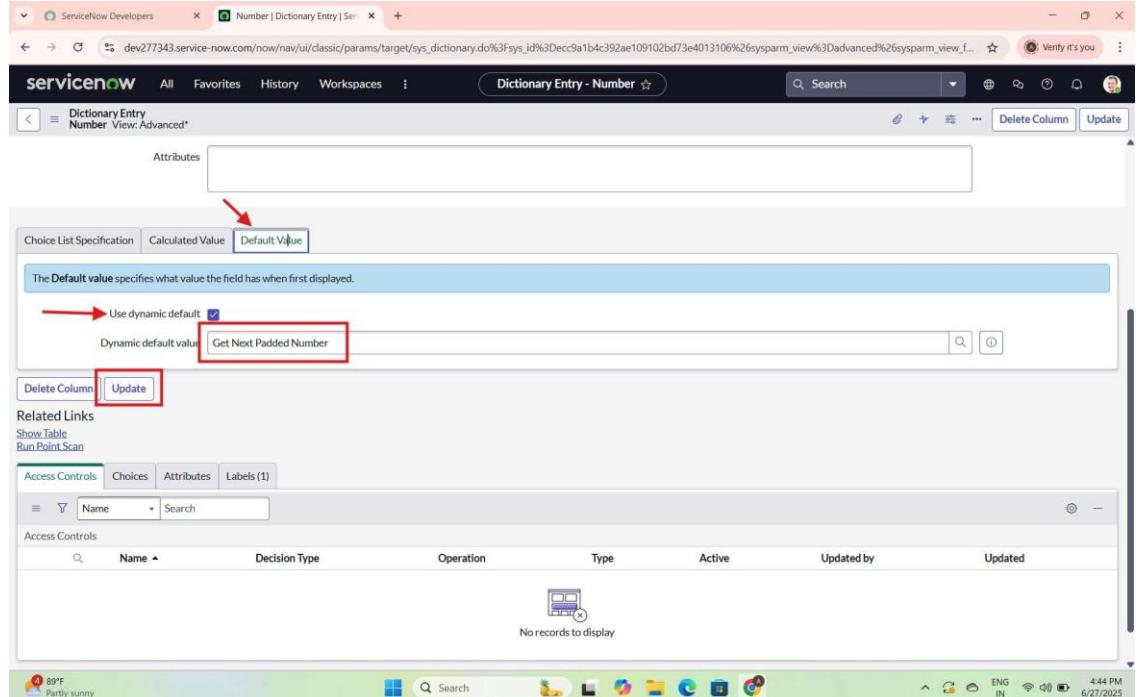
Making Number Field An Auto-Number

1. Double click on the Number Field/Column.
2. Go down and double click on Advanced view

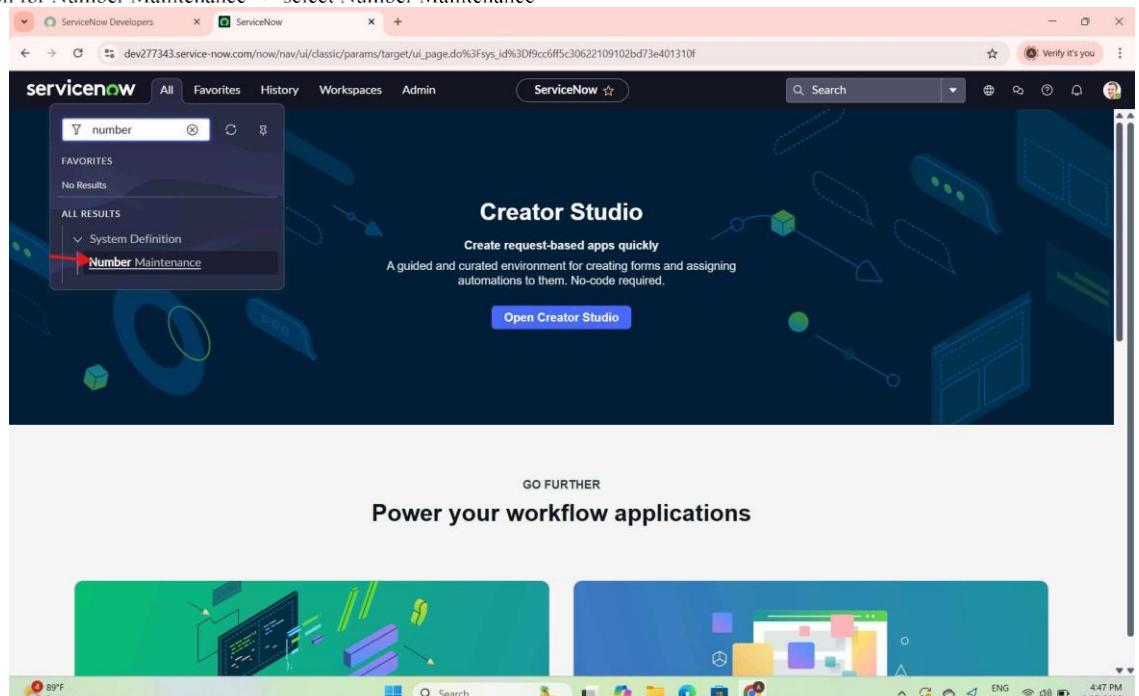
6/28/25, 7:45 AM

Project

3. In Default Value: Use dynamic default : check the box Dynamic default value : Get Next Padded Number
4. Click on Update.



5. Go to All >> In the filter search for Number Maintenance >> select Number Maintenance



6. Click on New.
7. Enter the below Details: Table : Family Expenses Prefix : MFE
8. Click on Submit.

Number - MFE

* Table: Family Expenses

Prefix: MFE

* Number: 1,000

Application: Global

Number of digits: 7

Update Delete

Related Links
Show Counter

. Configure the form

1. Go to All >> In the filter search for Family Expenses >> Open Family Expenses
2. Click on New
3. Go to the Header and right click there >> click on Configure >> Select Form Design

Family Expenses - Create MFE0001006

Configure >

Export >

Create Favorite

Copy URL

Copy sys_id

Reload form

Submit

Form Design

Form Layout

Related Lists

All

Table

Security Rules

Business Rules

Client Scripts

UI Policies

Data Policies

UI Actions

Notifications

Dictionary

* Date

* Amount

4. Customize or Drag Drop the form as per your requirement.
5. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
6. Make Date, Amount Mandatory Field by clicking on the gear icon and checking Mandatory
7. Click on Save.

The screenshot shows the ServiceNow Form Design interface. On the left, there's a sidebar with tabs for 'Fields' and 'Field Types', and sections for 'Formatters', 'Activities (filtered)', 'Contextual Search Results', and 'Ratings'. The main area is titled 'Form Design' and contains a table structure. The top row of the table has two columns labeled 'Number' and 'Amount'. Below this, there's a section labeled 'Expense Details' which is defined as a sub-table with one column. The status bar at the bottom shows system information like weather (89°F, Partly sunny), search bar, and system icons.

Milestone-4

Creation Of Daily Expenses Table

1. Go to All > In the filter search for Tables > click on New.
2. Enter the Details: Label : Daily Expenses Name : Auto-Populated Add Module to menu : Family Expenditure
3. Go to the Header and right click there>> click on Save.

Creation of columns(fields)

4. Near Columns Double click near insert a new row.
5. Give the details as: Column label : Number Type : String
6. Double click on insert a new row again
7. Give the details as: Column label : Date Type : Date
8. Double click on insert a new row again
9. Give the details as: Column label : Expense Type : Integer
10. Double click on insert a new row again
11. Give the details as: Column label : Family Member Name Type : Reference Max length : 800
12. Double click on insert a new row again
13. Give the details as: Column label : Comments Type : String Max length : 800
14. Go to the Header and right click there>> click on Save.

Column label	Type	Reference	Max length	Default value	Display
Comments	String	(empty)	800		false
Expense	Integer	(empty)	40		false
Family Member Name	Reference	.NET Application	32		false
Number	String	(empty)	40	javascript.getNextObjNumberPadded();	false
Created by	String	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Created	Date/Time	(empty)	40		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Date	Date	(empty)	40		false

. Making Number Field An Auto-Number

15. Double click on the Number Field/Column.
16. Go down and double click on Advanced view
17. In Default Value: Use dynamic default : check the box Dynamic default value : Get Next Padded Number
18. Click on Update.

19. Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
20. Click on New.
21. Enter the below Details: Table : Family Expenses Prefix : DFE
22. Click on Submit.

. Configure the form

23. Go to All >> In the filter search for Daily Expenses >> Open Daily Expenses
24. Click on New
25. Go to the Header and right click there>> click on Configure >> Select Form Design
26. Customize or Drag Drop the form as per your requirement.

The screenshot shows the ServiceNow Form Design interface. On the left, there's a sidebar with tabs for 'Fields' and 'Field Types'. Under 'Fields', several system fields like 'Created', 'Updated', etc., are listed. Under 'Formatters', there are options for 'Activities (filtered)', 'Contextual Search Results', and 'Ratings'. The main workspace is titled '# Daily Expenses [u_daily_expenses]' and contains three fields: 'Number', 'Expense', 'Date', and 'Family Member Name'. Below these is a section labeled '# Comments' with a placeholder 'Drag content, drop it here'. The bottom of the screen shows a taskbar with various icons and a status bar indicating '89°F Partly sunny' and the date '6/27/2025'.

27. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
28. Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
29. Click on Save.

Milestone-5

Creation Of Relationship

. Creation Of Relationship Between Family Expenses And Daily Expenses

1. Go to All >> In the filter search for Relationships >> Open Relationships

The screenshot shows the ServiceNow Relationships page. A search bar at the top has 'relationship' typed into it. The main navigation menu on the left includes 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. Under 'Relationships', there are sub-options like 'CI Relation Types', 'CI/User Relation Types', 'CI/Groups Relation Types', 'CI Relation Rollups', 'Suggested Relationships', 'Relationship Filters', and 'Relationship Type Exclusion...'. A red arrow points to the 'Relationships' option. The central area displays a 'Creator Studio' banner with the text 'Create request-based apps quickly' and a 'Go Further' section with 'Power your workflow applications'. The bottom of the screen shows a taskbar with various icons and a status bar indicating '89°F Partly sunny' and the date '6/27/2025'.

2. Click on New.
3. Enter the details: Name : Daily Expenses Applies to table : Select Family Expenses Daily Expenses : Select Daily Expenses
4. Click Save.

The screenshot shows the ServiceNow Developers interface with a script editor. The title bar says "Relationship - Daily Expenses". The main area contains a code editor with the following ECMAScript 2021 (ES12) code:

```

(function refineQuery(current, parent) {
    // Add your code here, such as current.addQuery(field, value);
    current.addQuery('u_date', parent.u_date);
    current.query();
})(current, parent);

```

Below the code editor are "Update" and "Delete" buttons. To the left, there's a "Related Links" section with a "Run Point Scan" link. The bottom of the screen shows a Windows taskbar with icons for search, file explorer, and various applications.

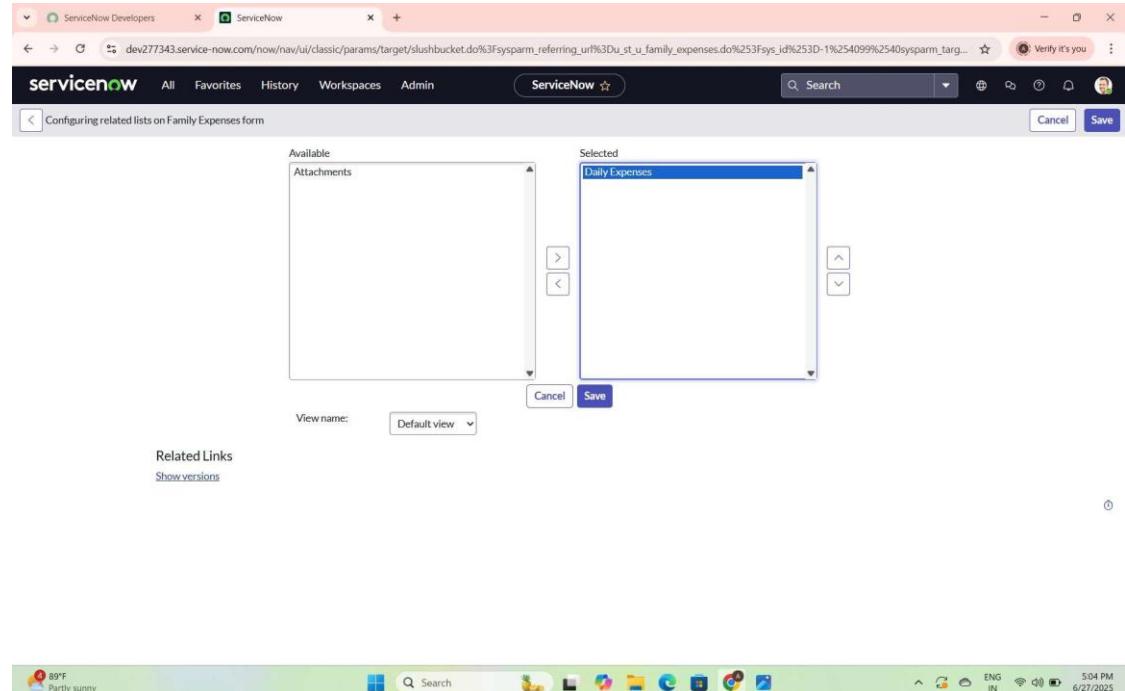
Milestone-6

Configuring Related List On Family Expenses

1. Go to All >> In the filter search for Family Expenses >> Open Family Expenses
2. Click on New
3. Go to the Header and right click there>> click on Configure >> Select Related Lists

The screenshot shows the ServiceNow Create Family Expenses form with a context menu open over the header. The menu items include "Save", "Configure", "Export", "Create Favorite", "Copy URL", "Copy sys_id", and "Reload form". The "Related Lists" option is highlighted with a blue selection bar. The main form area has a "Number" field set to "MFE0001007" and a "Expense Details" section. A "Submit" button is at the bottom. The bottom of the screen shows a Windows taskbar with icons for search, file explorer, and various applications.

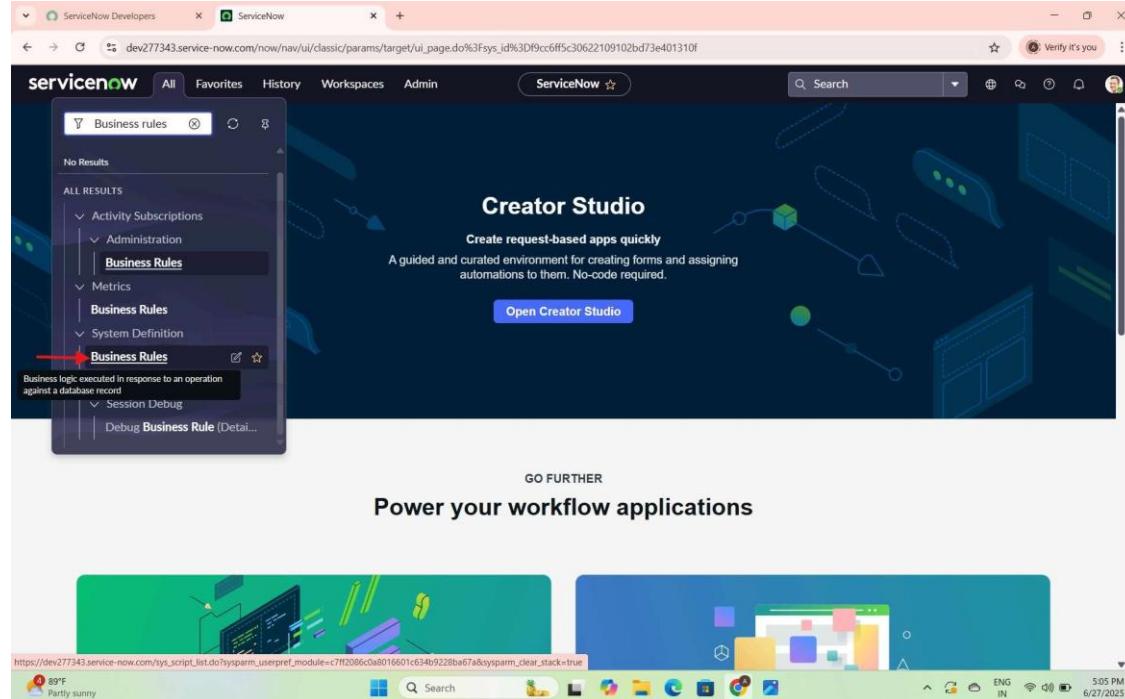
4. Add Daily Expenses to the Selected Area.
5. Click on Save



Milestone-7

Creation Of Business Rules

1. Go to All >> In the filter search for Business Rules.
2. Under System Definition Select Business Rules then click on New.



3. Enter the Details: Name : Family Expenses BR Table : Select Daily Expenses Check Advanced
4. In when to run Check Insert and Update

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met. [More Info](#)

Name: Family Expenses
Table: Daily Expenses [u_daily_expenses]

When to run:

- When:** before
- Order:** 100
- Actions:** Insert (checked), Update (checked), Delete (unchecked), Query (unchecked)

Filter Conditions: Add Filter Condition, Add OR Clause
--choose field-- --oper-- --value--

Role conditions:

- In Advance(we write the code) Write the below code >> (function executeRule(current, previous /*null when async*/) { var FamilyExpenses = new GlideRecord('u_family_expenses'); FamilyExpenses.addQuery('u_date',current.u_date); FamilyExpenses.query(); if(FamilyExpenses.next()) { FamilyExpenses.u_amount += current.u_expense; FamilyExpenses.u_expense_details += ">" + current.u_comments + ":" + "Rs." + current.u_expense + "-"; FamilyExpenses.update(); } else { var NewFamilyExpenses = new GlideRecord('u_family_expenses'); NewFamilyExpenses.u_date = current.u_date; NewFamilyExpenses.u_amount = current.u_expense; NewFamilyExpenses.u_expense_details += ">" + current.u_comments + ":" + "Rs." + current.u_expense + "-"; NewFamilyExpenses.insert(); } })(current, previous);
- Go to the Header and right click there>> click on Save.

Name: Family Expenses
Table: Daily Expenses [u_daily_expenses]

Advanced:

Condition: Turn on ECMAScript 2021 (ES12) mode

```

(function executeRule(current, previous /*null when async*/) {
    var FamilyExpenses = new GlideRecord('u_family_expenses');
    FamilyExpenses.addQuery('u_date',current.u_date);
    FamilyExpenses.query();
    if(FamilyExpenses.next())
    {
        FamilyExpenses.u_amount += current.u_expense;
        FamilyExpenses.u_expense_details += ">" + current.u_comments + ":" + "Rs." + current.u_expense + "-";
        FamilyExpenses.update();
    }
    else
    {
        var NewFamilyExpenses = new GlideRecord('u_family_expenses');
        NewFamilyExpenses.u_date = current.u_date;
        NewFamilyExpenses.u_amount = current.u_expense;
        NewFamilyExpenses.u_expense_details += ">" + current.u_comments + ":" + "Rs." + current.u_expense + "-";
        NewFamilyExpenses.insert();
    }
})(current, previous);

```

Milestone-8

Configure The Relationship

- Go to All >> In the filter search for Relationships >> Open Relationships.
- In that, open Daily Expenses Relationship.
- For Applies to table : Select Family Expenses.
- In Query with : write the below Query. (function refineQuery(current, parent) { // Add your code here, such as current.addQuery(field, value); current.addQuery('u_date',parent.u_date); current.query(); })(current, parent);

5. Click on Update.

The screenshot shows the ServiceNow Developers interface with the following details:

- Page Title:** Relationship - Daily Expenses
- Header:** Name: Daily Expenses, Application: Global, Applies to table: Family Expenses [u_st_u_family_expenses], Queries from table: Daily Expenses [u_daily_expenses]
- Script Editor:** Contains the following JavaScript code:


```

1 (function refineQuery(current, parent) {
2
3
4 // Add your code here, such as current.addQuery(field, value);
5
6 current.addQuery('u_date',parent.u_date);
7
8 current.query();
9
10 })(current, parent);
      
```
- Action Buttons:** Update (highlighted with a red box), Delete
- Bottom Bar:** Shows system status (90°F Partly sunny), search bar, and various icons.

Conclusion

In conclusion, implementing the "Calculation of Family Expenses Using ServiceNow" project offers numerous benefits to the household. By leveraging the robust capabilities of ServiceNow, family members can efficiently submit, track, and manage their expenses in a centralized and streamlined manner.